III. HEALTH ASSESSMENT PROGRAMS

A. IMMUNIZATION COVERAGE

Background

Vaccines are among the most effective and reliable methods to prevent and control disease. Every year, they prevent countless serious illnesses and thousands of possible deaths. About 100 million vaccine doses are given annually in the United States, most of them to infants and children as part of their routine immunization schedule. A single dose of some vaccines gives nearly complete protection. With others, a series of doses spread over months or years is needed for the best results.

Children in particular are beneficiaries of the protection from infectious illnesses that vaccines offer. Currently, there are ten diseases from which children are routinely protected through the use of standard childhood immunizations: diphtheria, tetanus, pertussis (whooping cough), polio, measles, mumps, rubella (German measles), hepatitis B, Haemophilus influenzae B (bacterial meningitis), and varicella (chicken pox). Enormous reductions in the occurrence of these serious diseases have taken place since the introduction of vaccines. For example, there were 894,134 cases of measles reported in the United States in 1941, but only 86 cases in 2000. Louisiana had no reported cases of measles in 2000 and 2001.

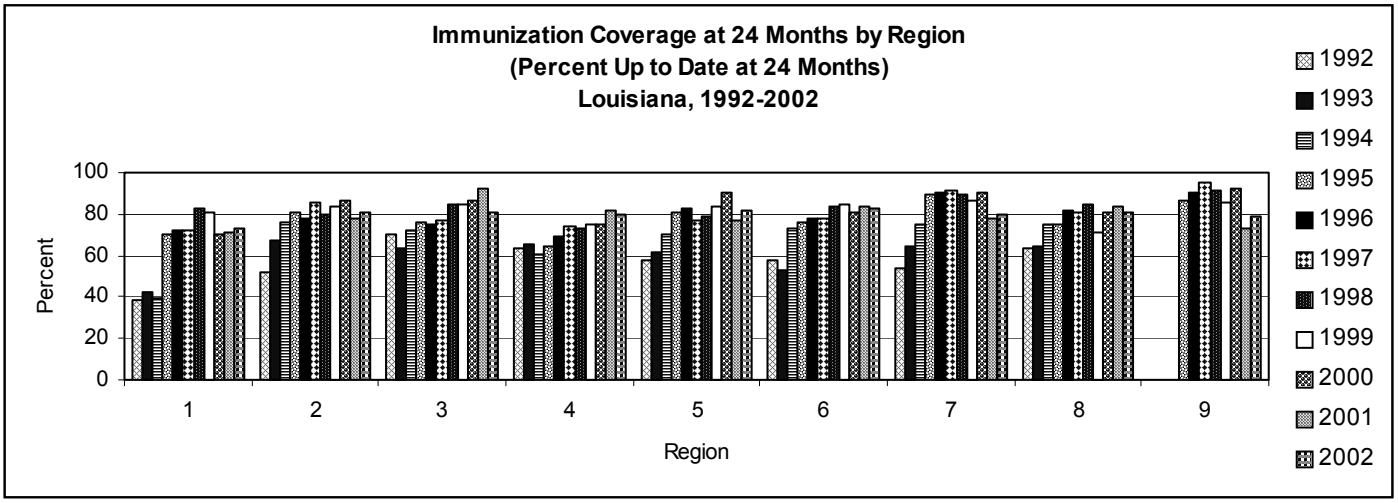
Although the public is most familiar with the vaccines used for childhood immunization, there are many others that afford protection to individuals at risk of infection from other types of exposures. Examples are the hepatitis A vaccine, which is available to select populations such as travelers to areas where the disease is endemic, and the meningococcal vaccine, which is available to select populations, such as college students living in dormitories.

In addition to being reliable and effective, vaccines are also some of the most cost-effective medical procedures available. The ten vaccine-preventable diseases addressed in standard childhood immunizations are very serious illnesses and very expensive to treat. Vaccines are relatively inexpensive and very effective. Cost estimates show that each dollar spent on immunization saves $10-$12 in direct medical and hospitalization costs. These estimates do not include attendant costs, such as workdays lost by family members, costs for outbreak control, or the burden of lives lost to these severe diseases. A prime example is measles, which leads to the hospitalization of approximately 10 percent of those who become ill. Even with excellent medical care, approximately one out of every 1,000 cases dies, usually from measles infection of the lungs and of the brain.

However, diseases that are prevented by routine childhood immunizations have not disappeared. Pertussis is spread by direct contact such as coughing on to others who are not immune. In countries where childhood immunizations against this disease have been stopped, large outbreaks of whooping

cough have occurred. The number of pertussis cases reported in Louisiana for year 2001 decreased to 12 cases as compared to 10 cases in 1999 and 21 cases in 2000. Diphtheria, another dangerous infectious disease, which has been controlled through childhood immunization, has not been observed in Louisiana since 1972. However, in recent years, epidemics of diphtheria have occurred in Eastern Europe and Asia. Without immunization, diphtheria and other vaccine-preventable diseases may be re-introduced to Louisiana and contribute to an increasing the number of cases.

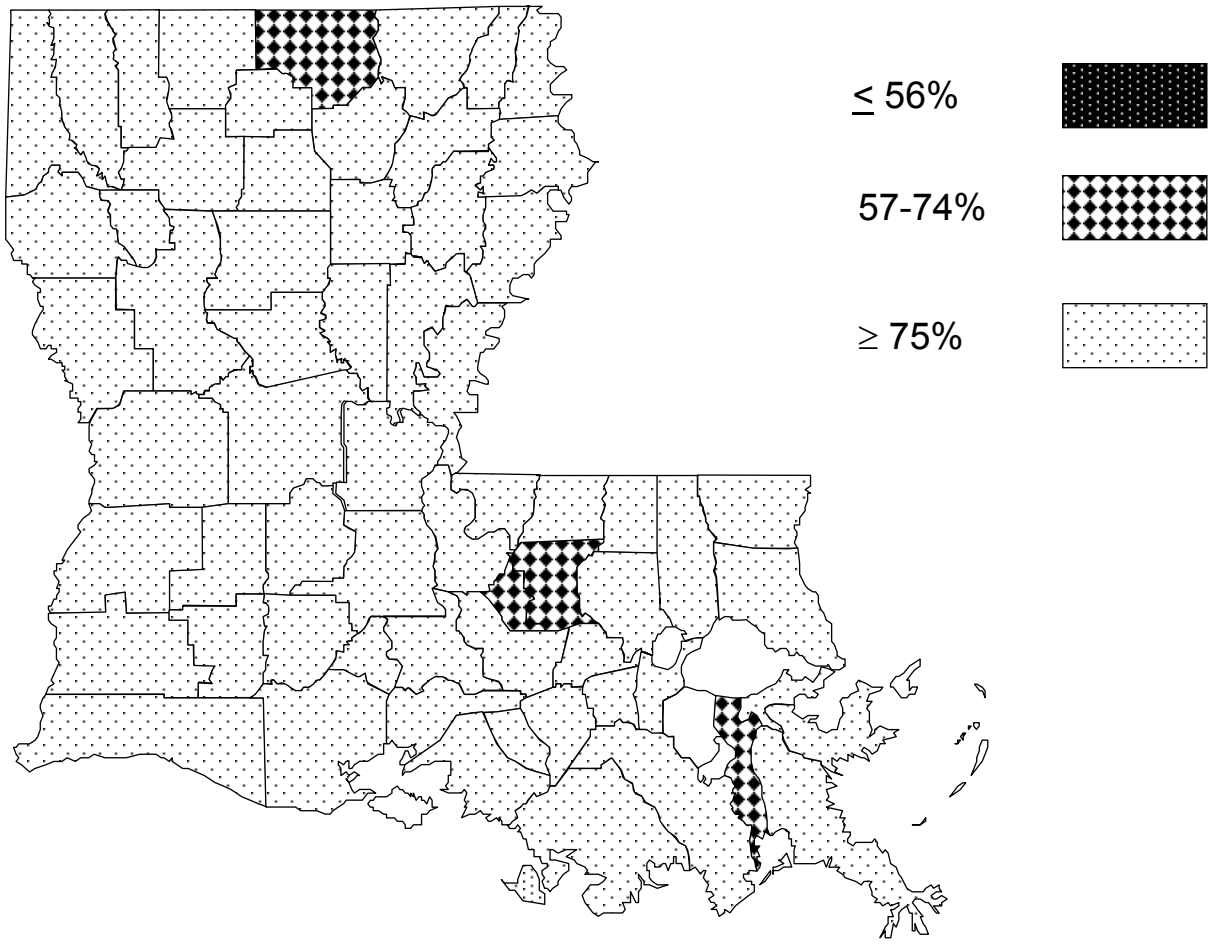
The IMMUNIZATION PROGRAM of the OFFICE OF PUBLIC HEALTH conducts periodic assessments to determine the immunization coverage rates throughout the state. As the graph below indicates, rates of coverage have been steadily increasing since 1992, though there have been variations over the years.



Source: Louisiana Department of Health and Hospitals, Office of Public Health, Immunization Program
Note: No data are provided for Region 9 (Slidell – Hammond area) for the years 1992 to 1994 because it was not instituted as a DHH-OPH region until 1995.

The map and table on the following page display the percent of immunization coverage at age 24 months among those served by parish health units. Jefferson Parish had the lowest immunization coverage rate at 72 percent, while Morehouse Parish had the highest rate at 92 percent.

Percent of Immunization Coverage at 24 Months of Age among Louisiana Children Served in Parish Health Units Louisiana, 2002-2003



Source: Louisiana Department of Health and Hospitals, Office of Public Health, Immunization Program

Immunizations: Percent Up-To-Date at Age 24 Months Louisiana, 2002-2003*	
Clinic	***%UTD 2002-2003 Results***
Region I	
Orleans-Edna Pilsbury	80.0
Orleans-Mandeville Detiege	67.0
Orleans-Mary Buck	88.0
Orleans-Katherine Benson	85.0
Orleans-Helen Levy	75.0
Orleans-St. Bernard Gentilly	78.0
Orleans-Ida Hymel	77.0
St. Bernard	82.0
Jefferson-Marrero	75.0
Plaquemines	77.0
Jefferson-Metairie	72.0
Region II	
Ascension	80.0
West Baton Rouge	89.0
West Feliciana	91.0
Iberville	77.0
East Feliciana-Clinton	84.0
Pointe Coupee	88.0
E. Baton Rouge	73.0
Region III	
St. James	86.0
Lafourche-Galliano	82.0
Lafourche-Thibodaux	80.0
Terrebonne	86.0
St. Mary	84.0
St. John	85.0
Assumption	80.0
St. Charles	N/A
Region IV	
Evangeline	79.0
St. Landry	86.0
St. Martin	88.0
Acadia	82.0
Region IV (continued)	
Vermilion	82.0
Lafayette	78.0
Iberia	83.0
Region V	
Allen	86.0
Calcasieu-Sulphur	85.0
Calcasieu-Lake Charles	80.0
Jefferson Davis	82.0
Beauregard	83.0
Cameron	88.0
Region VI	
Catahoula	82.0
LaSalle	90.0
Rapides	82.0
Grant	85.0
Winn	87.0
Vernon	87.0
Concordia	78.0
Avoyelles	83.0

Immunizations: Percent Up-To-Date at Age 24 Months Louisiana, 2002-2003*	
Clinic	***%UTD 2002-2003 Results***
Region VII	
Red River	80.0
Claiborne	83.0
Webster-Springhill	85.0
DeSoto	88.0
Natchitoches	79.0
Bienville	86.0
Sabine	87.0
Webster-Minden	84.0
Bossier-Bossier City	83.0
Caddo	75.0
Region VIII	
Morehouse-Bastrop	92.0
Franklin-Winnsboro	84.0
West Carroll-Oak Grove	84.0
Ouachita-Monroe	83.0
Caldwell	87.0
Tensas-St. Joseph	90.0
Lincoln	82.0
Jackson-Jonesboro	78.0
East Carroll	89.0
Union	72.0
Richland-Rayville	81.0
Ouachita-West Monroe	79.0
Madison	87.0
Region IX	
St. Helena	89.0
Washington-Franklinton	85.0
Washington-Bogalusa	82.0
Tangipahoa	81.0
St. Tammany	78.0
Livingston	82.0

*Up-to-date includes 4 DTAP, 3 OPV or IPV, and 1 MMR

N/A: Not Applicable - no longer an OPH Parish Health Unit

Source: Louisiana Department of Health and Hospitals Office of Public Health, Immunization Program

B. INFECTIOUS DISEASE SURVEILLANCE

Disease Surveillance

Surveillance of infectious diseases, chronic diseases, and injuries is essential to understanding the health status of the population and planning effective prevention programs. The history of the reporting and tracking of diseases that pose a risk to public health in the United States dates back more than a century. Fifty years ago, morbidity statistics published each week were accompanied by a statement: "No health department, state or local, can effectively prevent or control diseases without the knowledge of when,

where, and under what condition cases are occurring." Today, disease surveillance remains the primary tool for gathering information essential to controlling the spread of diseases.

Achievement of the CENTER FOR DISEASE CONTROL AND PREVENTION, Healthy People 2010 Objectives depends in part on the nation's ability to monitor and compare progress toward the objectives at the federal, state, and local levels.

Infectious disease surveillance activities are a primary function of the programs within the DEPARTMENT OF HEALTH AND HOSPITALS (DHH), OFFICE OF PUBLIC HEALTH (OPH). Many DHH-OPH programs exist to conduct disease surveillance for the State of Louisiana. A sampling of these programs includes the INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM, the SEXUALLY TRANSMITTED DISEASES CONTROL PROGRAM, the TUBERCULOSIS CONTROL PROGRAM, the HIV/AIDS PROGRAM, and the IMMUNIZATIONS PROGRAM.

Disease surveillance involves the collection of pertinent data, the tabulation and evaluation of the data, and the dissemination of the information to interested parties. This process is very important to public health because its stated purpose is the reduction of morbidity. Although the immediate use of surveillance information is for disease control; its long-term use is to assess trends and patterns in morbidity.

Surveillance also facilitates epidemiological and laboratory research, both by identifying cases for more detailed investigation or case-control studies, and by directing research to the most important avenues. Reports of unusual clusters of diseases are often followed by an epidemiological investigation designed to identify and remove any common source exposure or to reduce other associated risks of transmission.

Notifiable Diseases

The reporting of notifiable diseases to the Department of Health and Hospitals, Office of Public Health (DHH-OPH) is the backbone of disease surveillance in Louisiana. The Sanitary Code, State of Louisiana, Chapter II, entitled "The Control of Diseases," charges the BOARD OF HEALTH to promulgate: a list of diseases that are required to be reported, who is responsible for reporting those diseases, what information is required for each case of disease reported, what manner of reporting is needed, and to whom the information is reported.

Communicable disease case reporting is important in the planning and evaluation of disease prevention and control programs, in the assurance of appropriate medical therapy, and in the detection of common-source outbreaks. Surveillance data gathered through the reporting of notifiable diseases are used to document disease transmission, quantify morbidity and estimate trends, and identify risk factors for disease acquisition.

The DHH-OPH routinely follows up selected disease cases, either directly or through the individual's physician or other health care provider. Confidential tracking and follow-up are done to ensure initiation of appropriate prophylactic therapy for contacts of persons with the infectious condition, as well as to ensure appropriate preventive measures for the community. Confidentiality has been an essential element in the successful monitoring and maintenance of the health of the public in Louisiana. Through participation in disease reporting, physicians and other health care providers are integral in ensuring that public health resources are used most effectively.

Mandatory reporting is required for a number of infectious diseases, including sexually transmitted diseases, HIV/AIDS, tuberculosis, mumps, and many others. The surveillance procedures for measles and rubella, described later in this chapter, are typical of the procedures followed for all reportable diseases.

Bioterrorism Surveillance

The INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM has developed several systems to identify disease syndromes associated with bioterrorism agents prior to their confirmation, which may take several days.

Early detection of a bioterrorism event is considered essential. Most diseases caused by a bioterrorism agent are rapidly fatal, but may be treatable in the early stages or may even be preventable with the timely administration of antibiotics, vaccination, or antisera. If the disease is transmissible from person to person, early intervention is the best chance to prevent the spread of the disease. Early intervention may be exercised in a variety of scenarios. People affected by a bioterrorism agent may present themselves at emergency rooms, be transported by emergency medical service (EMS) personnel, consult at a dermatologist, or be examined by a coroner. Involvement of veterinarians in bioterrorism preparation is also crucial, given that many bioterrorism agents may primarily affect animals, and an animal may be the first affected.

The systems in place to address possible bioterrorism events are (1) emergency room syndromic surveillance, a Web-based reporting system for emergency departments; (2) emergency medical services syndromic surveillance, a Web-based reporting system for emergency medical services; (3) a veterinary disease reporting system, another Web-based system; (4) a call-in notification system with dermatologists; and (5) a call-in notification system with the parish coroners.

Infectious Disease Outbreak Investigations

Infectious diseases are transmitted by a variety of methods: human to human via oral/fecal route (ingestion of the organism); blood exposure; airborne and droplet routes; direct person-to-person contact; vectors such as mosquitoes and ticks; and animal to human (zoonotic) transmission. In Louisiana,

outbreaks have occurred from a wide variety of infectious diseases including hepatitis A, salmonella, shigella, Norovirus, clostridium, campylobacter, pertussis, measles and others. Outbreak investigations are an important and challenging component of public health, and respond to the most compelling reason to investigate a recognized or suspected outbreak of disease: Exposure to the source(s) of infection may be continuing. By identifying and eliminating the source of infection, additional cases can be prevented. For example, if cans of mushrooms containing botulinum toxin are still on store shelves, or in homes or restaurants, their recall and destruction can prevent further cases of botulism. Another reason for investigating outbreaks is that the results of the investigation may lead to recommendations or strategies for preventing similar future outbreaks. Other reasons for investigating outbreaks are the opportunities to describe new diseases and learn more about known diseases, evaluate existing prevention strategies (e.g., vaccines), train personnel in epidemiologic methods, foster cooperation between the clinical and public health communities, and address public health concerns about the outbreak. Even when an outbreak is over, a thorough epidemiological and environmental investigation often can increase our knowledge of a given disease and prevent future outbreaks.

The effectiveness of an investigation is in large part determined by how quickly and thoroughly investigative activities are initiated. Several years ago, the INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM began statewide, intensive training of selected public health field staff that comprise the Regional Outbreak Response Teams. These individuals are trained in basic epidemiological principles, outbreak investigation methodology, computer analysis and interpretation of data, effective presentation of results, and the selection of appropriate disease control methods. Each of the nine public health regional teams in DHH-OPH have several team members, including a nurse, a sanitarian, an epidemiologist, and a disease intervention specialist. Each team member brings a unique set of skills and knowledge that are important in conducting outbreak investigations. One individual is selected as the Regional Outbreak Response Team Coordinator for each region. This individual collaborates and coordinates all investigative activities through the OPH INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM'S state level Outbreak Response Team. Initial telephone conferences are held and information is assessed. Activities are coordinated and supervised by the INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM, and guidance and assistance are provided as needed. The Regional Outbreak Response Team members conduct most of the field activities, and both the INFECTIOUS DISEASE EPIDEMIOLOGY PROGRAM and the regional teams analyze the data. Recommendations are provided and guidance given for instituting appropriate disease control measures.

This investigation program has been highly successful in its handling of outbreaks in a timely manner with effective outcomes. Additionally, since these DHH-OPH staff members are located in the communities, they are in a better position to identify potential outbreak situations than are staff members housed in the central office. The concept of using public health staff from different disciplines and cross training them for a common, collaborative purpose sets a precedent for similar efforts dealing with other public health

issues and reflects the agency's goal of developing a streamlined, cost effective, integrated workforce. One unexpected benefit has been increased local visibility which has created positive impressions with the public and the media.

Surveillance for Measles and Rubella (German Measles)

All health care providers are required, by law, to immediately report suspected cases of measles and rubella by telephone to their local parish health units. When a possible case is reported, local and statewide public health personnel are mobilized immediately to evaluate the case and to establish a rapid control effort in order to prevent the spread of the illness. All contacts are interviewed by telephone or in person, and children and adults without adequate immunization are immediately vaccinated.

Measles and Rubella are highly infectious and spread rapidly. One out of every ten individuals with measles requires hospitalization and one out of every thousand dies. Women who are infected with rubella during pregnancy have a high likelihood of delivering infants with severe disabilities. Consequently, women of childbearing age are encouraged to receive two doses of Measles Mumps and Rubella (MMR) vaccine, at least one month apart and at least three months prior to becoming pregnant.

A measles outbreak was identified in Louisiana in 1995, with 17 cases identified before the spread of the disease was stopped. The outbreak lasted 37 days. Control of the outbreak required the examination of 35 suspected cases, a total of 3,252 telephone calls, the immunization of 2,527 individuals, and active investigations at 28 sites, including day care centers, hospitals, and physicians' offices.

Selected 2001 Results of Infectious Disease Surveillance

- The largest outbreak of Saint Louis Encephalitis in Louisiana occurred in the Monroe area. There were 70 cases.
- For the past five years, reported cases of Salmonella ranged from 700 to 800 each year with 34 percent of cases occurring in the zero to four age group.
- Shigellosis cases decreased slightly in 2001. Children under the age of 10 years accounted for 43 percent of the cases.
- The numbers of Vibrio cases remained stable with 32 cases reported in 2000 and 34 cases reported in 2001. *Vibrio parahemolyticus* (9 cases) and *Vibrio vulnificus* (15 cases) were the most common forms. Of the Vibrio cases with known exposures, contact with saltwater or raw seafood drippings, and seafood consumption were reported.
- At least 75 percent of *V. vulnificus* cases had underlying conditions prior to onset of illness with the most frequently reported underlying conditions including liver disease (45 percent), alcoholism (40 percent), and heart disease (20 percent). Two thirds of *V. vulnificus* cases consumed oysters, of

these cases over half had consumed raw oysters. Some cases were diagnosed with wound infections resulting from contact with salty brackish water or raw drippings from seafood.

- The state rate of 2.0 per 100,000 population for hepatitis A is only about half that of the national rate. The number of cases reported was 87, which was about 10 percent of the estimated total number of new cases.
- The number of acute cases of hepatitis C reported decreased from 451 to 151 in 2001; the sharp decrease was probably due to a change in case definition by the CDC. It is estimated that 45,000 people in Louisiana are infected with hepatitis C.
- The total number of cases of early syphilis (primary and secondary) has been consistently declining, from 304 in 1999, to 210 in 2000 and 173 in 2001.
- The total number of gonorrhea cases reported increased slightly each year from 1995 to 2000. For the first time in 5 years, there was an 8 percent decrease to 12,288 cases.
- The Louisiana incidence rate of gonorrhea in 2001 was 276 per 100,000 population which was more than double the national rate of 133.2 per 100,000 population.

Reports

The bimonthly *Louisiana Morbidity Report* and the *Epidemiology Annual Report* are published by the DHH-OPH, INFECTIOUS EPIDEMIOLOGY PROGRAM. Both publications present information and statistics describing the status of reportable diseases in Louisiana.

C. SEXUALLY TRANSMITTED DISEASE (STD) AND HIV/AIDS SURVEILLANCE

Contracting a sexually transmitted disease can have serious consequences. For example, advanced (tertiary) syphilis can produce neurological, cardiovascular, and other terminal disorders, pelvic inflammatory disease, infertility, ectopic pregnancy, blindness, cancer, fetal and infant death, birth defects, and mental retardation in children born to infected mothers.

The DHH-OPH'S STD CONTROL PROGRAM and HIV/AIDS PROGRAM work to: 1) conduct surveillance to determine the incidence and prevalence of STDs and HIV/AIDS; 2) monitor STD and HIV/AIDS trends; 3) collect data on the location and referral of persons with or suspected of having an STD, in order to facilitate medical examination and provide early treatment; and 4) conduct partner notification to limit the spread of disease.

2001 National Rankings

- Nationally, Louisiana has a high ranking among the 50 states with regard to rates of STDs and HIV/AIDS.

- Primary and secondary syphilis rates in Louisiana ranked third highest in the nation in 1998 and 1999, and eighth highest in 2000 and 2001.
- Gonorrhea rates ranked fourth highest in the nation in 1998, third highest in 1999, second highest in 2000, and the highest in 2001.
- Louisiana ranked eighth highest among the states' AIDS case rates and thirteenth highest in the number of AIDS cases reported in 2001. The metropolitan Baton Rouge area ranked seventh and the metropolitan New Orleans area ranked nineteenth in AIDS case rates among the large cities in the nation.

2001 and 2002 Disease Statistics

Please refer to the STDs and HIV/AIDS sections in "Chapter II: Morbidity."

Reports

The STD CONTROL PROGRAM and the HIV/AIDS PROGRAM maintain program databases, and generate specific analyses and reports by cause, location, and demographic factors for individuals, communities, and agencies. The HIV/AIDS PROGRAM also publishes the *HIV/AIDS Annual Report*, monthly reports and nine annual regional reports which are available to the public.

D. TUBERCULOSIS (TB) SURVEILLANCE

The DHH-OPH TB CONTROL PROGRAM conducts active surveillance for tuberculosis in the state. Regional staff interact with area physicians, hospitals, and laboratories in the course of their duties. All known or suspected cases of tuberculosis are investigated to assure that transmission of the disease is contained. Currently, the TB Control Program in Louisiana is working with CDC to enhance surveillance activities. An improved methodology is being implemented to facilitate reporting and tracking.

2001 and 2002 Disease Statistics

Please refer to the Tuberculosis section in "Chapter II: Morbidity."

E. Alcohol & Drug Abuse Program: Intravenous Drug Use Treatment, STD, TB, and HIV/AIDS Screening

National statistics show that more than 70 conditions requiring hospitalization, most notably cancer, heart diseases, and HIV/AIDS, have risk factors associated with substance abuse. One out of every five dollars Medicaid spends on hospital care is attributable to substance abuse (U.S. Department of Health and Human Services, 1997 Fact Sheet). The same report shows that injecting drug use is the primary mode of transmission of HIV among women and is responsible for 71 percent of AIDS cases among women. The lifetime cost of taking care of one AIDS patient is approximately $85,000. The U.S. Substance Abuse and Mental Health Services Administration estimates that over five million persons in the United States were in need of treatment for severe drug abuse problems in 1998. Almost 60 percent of these people, or an estimated 2.9 million, have not received treatment for their addiction. The size of this treatment gap has remained relatively unchanged over the past eight years, ranging from 54 percent to 68 percent.[1]

As part of the Louisiana's State Demand Need Assessment Studies, the DHH Office for Addictive Disorders (OAD) collaborated with the Research Triangle Institute in North Carolina, and Louisiana State University (LSU) Medical Center in New Orleans, to publish an Integrated Population Estimates of Substance Abuse Treatment Needs Study, in August of 1999. This work was supported by the Center for Substance Abuse Treatment (CSAT). The study showed that 10.2 percent of Louisiana adults, or 318,857 persons, were found to be in need of substance abuse treatment. The DHH-OPH region with the greatest number of persons needing services was Region 1 (Orleans, Jefferson, Plaquemines and St. Bernard parishes). The region with the fewest number of individuals needing treatment was Region 6 (Avoyelles, Catahoula, Concordia, Grant, LaSalle, Rapides, Winn and Vernon parishes).

Epidemiology

The Community Epidemiology Work Group (CEWG) is a national network of epidemiologists and researchers who meet twice a year to discuss current and emerging substance abuse problems. A report by the Governor's Office of Crime Control & Prevention[2] highlighting proceedings from the 48th CEWG meeting held in Baltimore, Maryland in June 2000 shows the following trends:

Ecstasy (MDMA) use appears to be increasing in the 21 CEWG areas.[3] The percentage of high school seniors reporting that Ecstasy was "fairly easy" or "very easy" to obtain increased from 22 percent in 1989 to 40 percent in 1999, according to the data from the Monitoring the Future high school survey. These

1 CSAT by Fax, August 30, 2000, Vol. 5, Issue 13.

2 CESAR. September 4, 2000, Vol. 9, Issue 35.

3 CESAR. September 18, 2000, Vol. 9, Issue 37.

findings support recent reports that Ecstasy, traditionally associated with clubs and rave parties, is becoming more acceptable to other mainstream populations.

Marijuana indicators, which have increased dramatically over the past decade, stabilized in 17 of the 21 CEWG areas. However, marijuana abuse remains a serious problem.

Methamphetamine use continues to decline since 1999 in the CEWG areas.

Cocaine indicators continue to decrease or remain stable in the majority of the CEWG areas.

Key findings issued by the Louisiana State Epidemiology Work Group (LAEWG) in its May 1998 proceedings show a decline in admissions by primary drug of abuse across ten parishes for cocaine, alcohol, and methamphetamine. Increases in admissions were recorded for Marijuana, Heroin, and "Other Drugs."

The State of Louisiana Communities that Care Youth Survey (CTC): Student Use of Alcohol, Cigarettes, Marijuana and Inhalants

According to a Communities that Care Youth Survey (6th, 8th, 10th, and 12th grades) published in May 1999, the substances that are the most commonly used by Louisiana's students - alcohol, tobacco, marijuana, and inhalants - were used at levels that were similar to current national levels.

Alcohol was the most widely used substance. The lifetime prevalence rate for alcohol use rose from 28 percent in 6th grade to 79 percent in 7th grade. Combining all grade levels, slightly more than half (55 percent) of all students have used alcohol sometime in their lifetimes. Nearly one third (32 percent) of Louisiana students reported using alcohol in the past 30 days.

Tobacco (cigarettes and chewing tobacco) was the next most commonly used substance among Louisiana students. Lifetime prevalence of cigarette use in Louisiana ranged from 27 percent in the 6th grade to 33 percent in the 12th grade; 32 percent of students reported using cigarettes in the past 30 days. Overall, 49 percent of Louisiana students have used cigarettes sometime in their lifetime.

Marijuana use has risen over the last six years for middle and high school students. In their lifetime, about 22 percent of Louisiana students have used marijuana, with lifetime use rising from 4 percent in the 6th grade to 42 percent in the 12th grade. Thirty-day use of marijuana averaged 10 percent across all grades, with 2 percent of 6th graders reporting use in the past 30 days and 18 percent of 12th graders reporting use.

Intravenous Drug Users Treatment

DHH-OAD'S policy gives intravenous drug users (IDUs) statewide priority admission status to programs (contract and state) and treatment modalities. Block grant requirements mandate that IDUs be admitted to treatment programs within 14 days after request for admission. Interim services are provided within 48 hours if comprehensive care cannot be made available upon initial contact, with a waiting period of no longer than 120 days. OAD offers outreach services statewide using the Indigenous or Behavioral Model, or other models. Activities include education, prevention, condom distribution, clean needle demonstrations, medical evaluations, and referrals.

STD, TB, and HIV/AIDS Screening

In addition to the treatment of problems of addiction, OAD makes testing available for STD's, TB, and HIV to each individual receiving treatment. Testing is offered, either directly or through arrangements with other public or nonprofit private entities, through a Qualified Service Organization Agreement (QSOA) and a Memorandum of Understanding (MOU) between OPH and OAD. This system includes the provision of the necessary supplies by OPH's STD CONTROL, TB CONTROL, and HIV/AIDS PROGRAMS for onsite STD, TB, and HIV testing of OAD clients. Early intervention services include screening, testing and pre- and post-test counseling.

Individuals testing positive for HIV are referred to the DHH-OPH clinics for further evaluation and appropriate testing. Once a client is identified as an HIV patient in the DHH-OPH system, he or she is referred to the local consortium and/or directly to a charity hospital outpatient clinic, under the auspices of DHH-OPH. Besides referrals to public agencies, clients can be referred to other HIV supportive services that are available in the community. OAD utilizes this referral network to access additional services for substance abuse clients diagnosed with HIV/AIDS. The Office has established a working relationship with the referral entities and is able to monitor the needs of clients who have been referred. OAD also provides ongoing counseling to its clients regarding HIV prevention and treatment, self-help groups, and information and referral services.

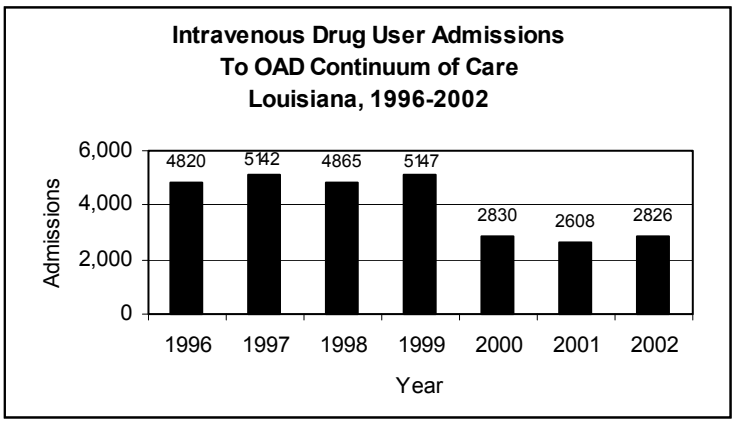
OAD participates in the Statewide HIV Community Planning Group (SCPG) and two subcommittees, Nominations and Special Needs, at the regional level. The goals of the statewide group are to identify interventions that will assist in preventing future infections with HIV and STDs among Louisiana's residents. Groups targeted for intervention are racial and ethnic minority groups, sexually active females, MSMs, youth, and substance abusers. Currently, interventions utilized are street outreach, counseling and testing, and condom availability.

The SCPG composition is representative of each region and individuals with expertise in education, substance abuse, health, and public health; special at-risk populations (e.g., youth, persons who are HIV

infected, AIDS patients, Latinos, blacks, Native Americans, women, individuals with a varied sexual lifestyle); and representatives from the DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS, the DEPARTMENT OF EDUCATION, and DHH'S OAD. The regional CPG meets monthly and the statewide committee meets quarterly. Accomplishments for last year included the establishment of a 3-year state plan that was submitted and approved by the CDC, the hosting of two well-attended STD/HIV Annual Conferences, and the achievement of parity in the composition of the committee.

1999-2002 Program Statistics
Intravenous Drug Users (IDUs)

OAD'S Management Information System (MIS) reports that there were 2,826 IDU admissions to the OAD continuum of care for SFY 2002 (9 percent of total admissions); 2,666 admissions during SFY 2001(9 percent of the total admissions), 2,830 during the year 2000 (9 percent of the total admissions) 5,147 during 1999 (17 percent of the total admissions), 4,865 during 1998 (18 percent of the total admissions), 5,142 admissions during SFY 1997 (20 percent of the total admissions), and 4,820 admissions for SFY 1996 (19 percent of the total admissions). Counts from SFY 2000 onward are significantly lower than prior years.

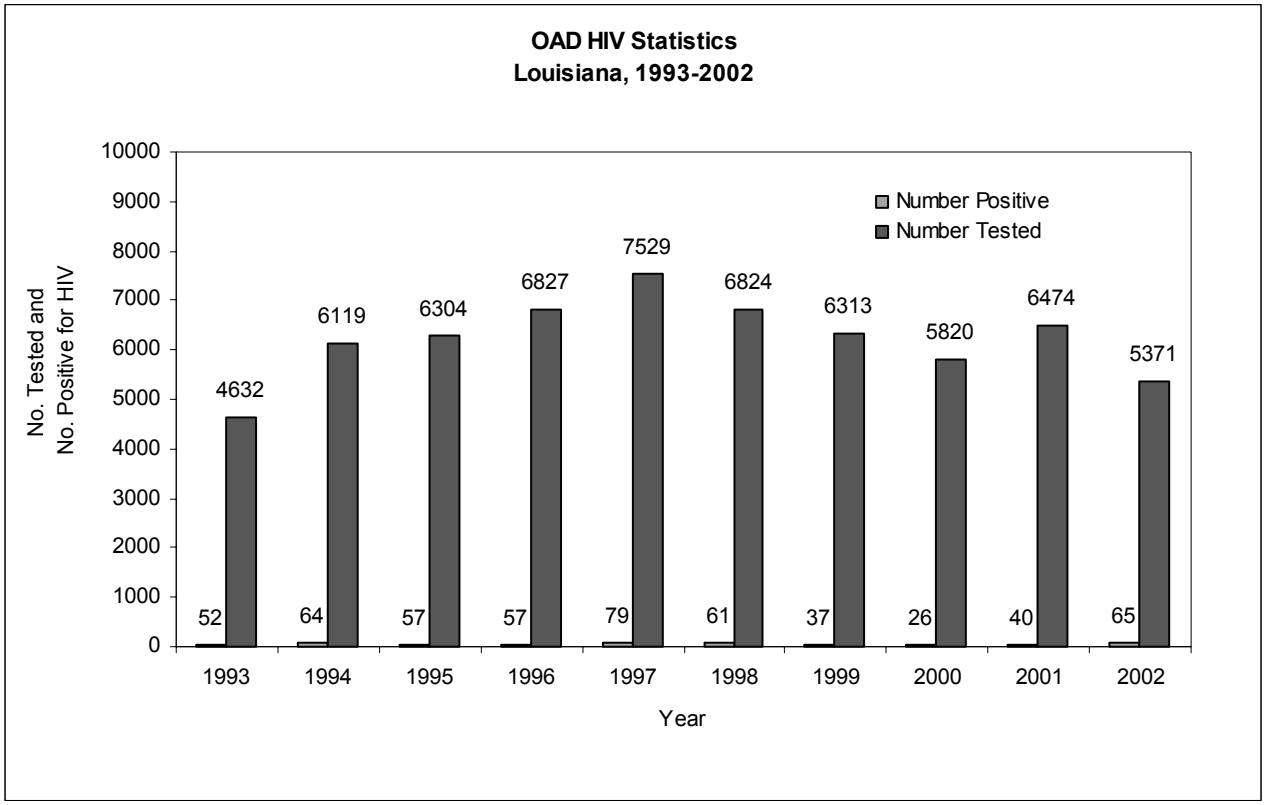


Source: Louisiana Department of Health and Hospitals, Office for Addictive Disorders

HIV/AIDS

In SFY 1999, Louisiana had an incidence rate of 18 HIV cases per 100,000 population. As a result, the state was eligible for block grant expenditures for HIV services (minimum of 5 percent of the total award). DHH-OPH's summary of statistics for calendar year 2002 showed that 5,371 HIV tests were conducted at OAD sites; of these, 65 (<1 percent) tested positive. Calendar year 2001 showed 6,474 HIV tests with 40 (<1 percent) positive results. Year 2000 reports showed that 5,820 HIV tests were conducted at OAD sites. Of this population, 26 (<1 percent) tested positive. OAD sites performed approximately 9.8 percent of the total HIV testing done in the state in 2000. During 1999, 6,313 tests were performed with 37 (<1 percent) of those tests having a positive result. In the year 1998, 51 of 6,824 tests performed were positive (<1 percent) while in 1997, 79 of 529 tests performed were positive (<1 percent). There have

been no significant changes in positive results trends since 1992. OAD provided 5,191 services to HIV infected clients during SFY 2000, 5,045 services
for SFY 2001 and 4,765 services for SFY 2002.



*1999 figures are from January 1999 to November 1999

Source: Louisiana Department of Health and Hospitals, Office of Addictive Disorders

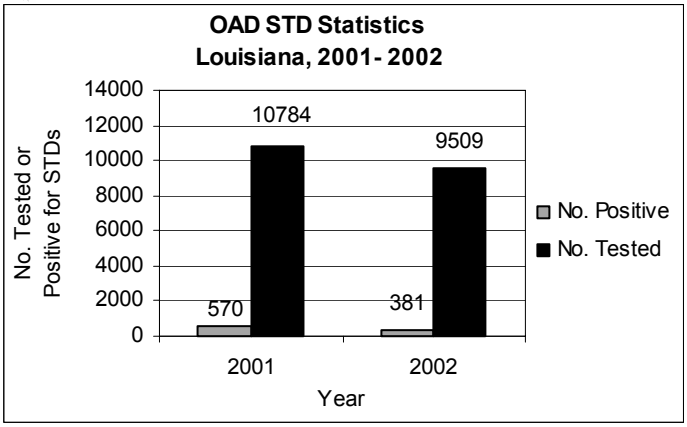
Tuberculosis

For SFY 2002, OAD tested 11,305 clients for tuberculosis, of which 591 test results were positive (5.2 percent): 25,910 services were provided to this population in 2002. During SFY 2001, 10,438 clients were tested and 740 (7.1 percent) had positive results.[4] OAD reports 9,117 services provided to TB infected clients during SFY 2000, 9,484 services for SFY 2001 and 9,925 services for SFY 2002.

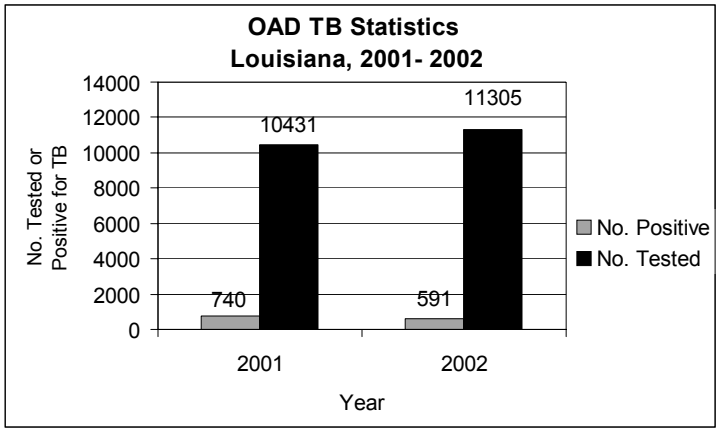
STDs

For SFY 2002, there were 9,509 STD tests conducted, of which 381 (4 percent) were positive.[4] During the 2001 SFY, 10,784 OAD clients were tested for STDs; 570 (5 percent) were found to be positive.[4] In SFY 2000, a total of 5,442 services were provided to STD infected clients; 5,044 services were provided in SFY 2001; and 5,722 services were provided in SFY 2002.

[4] OAD Set Aside Quarterly Reports



Source: Louisiana Department of Health and Hospitals, Office of Addictive Disorders



Source: Louisiana Department of Health and Hospitals, Office of Addictive Disorders

F. STATEWIDE CHILD DEATH REVIEW PANEL

State legislation established a Statewide Child Death Review Panel which is composed of a multi-disciplinary group of professionals in the fields of medicine, social services and justice. The Panel mandate requires the review of records for all unexpected deaths of children aged 15 years and younger. The Panel is also responsible for assuring that proper investigative, follow-up, and prevention programs to limit or prevent such deaths are in place. The DHH-OPH's EMS/INJURY RESEARCH AND PREVENTION SECTION identifies cases by searching the Vital Records electronic mortality file.

Reports

The Statewide Child Death Review Panel presents an *Annual Report* to the Legislature with statistical, analytical, and consultative support from the DHH-OPH's EMS/INJURY RESEARCH AND PREVENTION SECTION.

G. DOG BITE INJURIES

About 2 percent of the population of Louisiana sustains dog bites annually. Few result in fatalities, however, in a recent year (1999), there were two fatalities in the state of Louisiana from dog attacks. Children experience most of the dog bites, and the bites are from dogs that they know, rather than unknown dogs. Children experience dog bites in ways different from adults, and a dog bite can be more traumatic for a child. There is the breakdown in trust, as well as the fear related to the child's relative size and strength compared to the dog. There is also the trauma of treatment, if any is needed. Dog bites can be very serious and are common, though largely preventable, injuries.

The EMS/Injury Research and Prevention Program performed a special study of the incidence and characteristics of dog bites in an urban setting. Cooperating hospital emergency room personnel provided information on dog-bite-related visits over a specified time period. The local Society for the Prevention of Cruelty to Animals (SPCA) contributed information from their data on reports of dog bites.

Reports

A report on the outcome of this surveillance project, accompanied by information on avoiding dog bites, is available from the EMS/INJURY RESEARCH AND PREVENTION PROGRAM (http://oph.dhh.state.la.us/injuryprevention/index.html).

H. PERSONAL FLOTATION DEVICES

The combination of natural bodies of water, swimming pools, and drainage canals in Louisiana leads to higher than average numbers of injuries and deaths from drowning. Staff from the INJURY RESEARCH AND PREVENTION PROGRAM performed an observational survey of boaters in conjunction with the DEPARTMENT OF WILDLIFE AND FISHERIES.[5] The results of the survey showed that only a small percentage of boaters used personal flotation devices such as life jackets, which are known to save lives. As an adjunct to featuring the outdoor opportunities for visitors to the state, advertising visuals should include safety equipment in use. Other opportunities for preventive education exist in visual materials used at point-of-sale in sporting goods stores and swimming pool related businesses.

Reports

A report on this survey, accompanied by recommendations, is available from the EMS/INJURY RESEARCH AND PREVENTION PROGRAM (http://oph.dhh.state.la.us/injuryprevention/index.html).

I. INJURY MORTALITY DATABASE

Injuries are the leading cause of death in individuals aged 1 year to 34 years, and the fourth leading cause of death overall in Louisiana. These data are from the Injury Research and Prevention Section, which maintains the Injury Mortality Database. The database is extracted from the DHH-OPH Vital Records electronic death files dating back to 1986, and is an important resource for internal and external planners, policy-makers, and advocates.

The Injury Mortality Database organizes death certificate information on all injury-related deaths in the state. The information is then used to examine trends in the occurrence of specific injuries or groups of

[5] MMWR. May 25, 2001 / 50(20);413-4.

injuries and to identify and track the injury experiences of different at-risk groups. It provides important data for the planning and evaluation of interventions, public policy development, resource planning, and identification of emerging problems.

Reports

The INJURY RESEARCH AND PREVENTION SECTION can generate specific tables, reports, and analyses by cause of death, residency, and a variety of demographic factors upon request for individuals, communities, or agencies. Some mortality information is also available on the internet through the CDC's Web-based Injury Statistics Query and Reporting System (WISQUARS).

J. BURN INJURIES

Hospitals are mandated by state legislation to report severe burn injuries to the OFFICE OF THE STATE FIRE MARSHAL to assist in the identification of arsonists injured while committing the crime. The INJURY RESEARCH AND PREVENTION SECTION has in the past partnered with the State Fire Marshal to provide a broader analysis of data that describes patterns of burn injuries in Louisiana. These data can anchor the development of burn injury prevention initiatives, resource planning, and identification of higher risk groups. Extended training for EMS, emergency room, and fire control personnel in areas of higher risk may be based on these findings.

K. LOUISIANA ADOLESCENT HEALTH INITIATIVE

In September 1995, the Louisiana Adolescent Health Initiative (AHI) was launched. AHI facilitates a coordinated, multi-disciplinary approach to adolescent health care, disease prevention, and health promotion in the state. The goal of the initiative is to provide Louisiana adolescents with the opportunity to grow and prosper in a healthy, nurturing, and safe environment. AHI is reaching this goal by increasing coordination and collaboration among internal programs and external agencies, infusing adolescent voices in planning and policy-making efforts of the state, and providing an infrastructure that enables local communities to more effectively and efficiently address adolescent health needs.

The collection of data and dissemination of information is an essential part of AHI. Providing information on both adolescent health issues and on current adolescent health activities is a priority. DHH-OPH serves as a central repository for such information. The use of statewide teen health questionnaires and statewide adolescent focus groups, coupled with the collection of adolescent health statistics, provides parents, communities, politicians, and policy-makers with a clear picture of adolescent health in Louisiana.

Currently, there are many state and local projects that emphasize different aspects of adolescent health. Some focus on teenage pregnancy or teen parenting, while others may focus on HIV/AIDS, tobacco control, conflict resolution, cardiovascular health, or the maintenance of school-based health clinics. AHI allows for the planning, development, implementation, and evaluation of these activities in a coordinated, collaborative fashion. In addition, it broadens the scope of cooperation to include the DHH-Office of Mental Health (OMH) and OAD and the Office of Youth Services, among others. Such team-building efforts are necessary to merge the work of all agencies working toward the common goal of ensuring health and well-being of Louisiana's youth.

AHI : Activities to Date:

- Directed the Teen Talk 2000 Focus Group Project to nearly 300 Louisiana youth in all 9 OPH Regions;
- Produced and distributed the 2000 Louisiana Adolescent Health Fact Sheet, which gives an accurate account of the health status of Louisiana adolescents;
- Planned and coordinated the 2000, 2001 and 2002 Safe Summer Youth Rallies;
- Produced the AHI Website that is updated annually;
- Administered quarterly statewide Adolescent Health Initiative Steering Committee Meetings, bimonthly Body-Wise Nutrition & Obesity Prevention Program Meetings, monthly Louisiana Youth Suicide Prevention Meetings, and monthly Louisiana Young Women's Health Summit Meetings;
- Increased coordination with over 100 internal DHH-OPH programs and external agencies involved in public health, public policy and social welfare;
- Provided technical assistance to local, statewide and national adolescent health coalitions that are performing comprehensive adolescent activities (Let's Talk Month Activities, National Day to Prevent Teen Pregnancy, National Week to Prevent Suicide, Yellow Ribbon Youth Suicide Prevention Week, and National Women's Health Week Activities)
- Featured in multiple Louisiana newspapers, TV stations, and national newsletters;
- Formed and chairs the Louisiana Youth Suicide Prevention Task Force; trained 400 multi-disciplinary professionals in all 9 OPH regions, and hosted the first Multi-parish Planning Summit to Prevent Youth Suicide.

AHI : Continuing Activities:

- Produces, distributes and annually updates the Louisiana Adolescent Data Book, which includes a statistical compilation of adolescent health indicators;
- Produces, distributes and annually updates the Louisiana Teen Pregnancy Prevention Directory, which includes a listing of statewide programs that provide counseling and medical services to help teens prevent pregnancy;
- Collaborates with other state & national adolescent projects (National Campaign to Prevent Teen Pregnancy, Advocates for Youth, Louisiana Teen Pregnancy Prevention Task Force, and New Orleans Mayor's Children Service's Collaborative);

- Serves as an Adolescent Specialist on many statewide Adolescent Task Forces;
- Gives AHI Presentations at national (i.e., *Healthy People 2010*) statewide and local conferences;
- Plans and coordinates the Body-Wise Nutrition and Obesity Prevention School Program; and the Louisiana Young Women's Health Summit.

L. ENVIRONMENTAL EPIDEMIOLOGY AND TOXICOLOGY

The DHH-OPH'S SECTION OF ENVIRONMENTAL EPIDEMIOLOGY AND TOXICOLOGY (SEET) promotes reductions in disease morbidity and mortality related to human exposure to chemical contamination. SEET oversees and responds to public health needs across the state with regard to environmental health issues.

In recent years, there has been an increase in public awareness of the acute and chronic health effects of chemicals in the environment and a greater demand for SEET to investigate these effects. SEET attempts to address residents' concerns by:

- Identifying toxic chemicals in the environment that are likely to cause health effects;
- Evaluating the extent of human exposure to these chemicals and the adverse health effects caused by these exposures;
- Making recommendations for the prevention/reduction of exposure to toxic chemicals and the adverse health effects caused by these exposures; and
- Promoting a better public understanding of the health effects of chemicals in the environment and of the ways to prevent exposure.

Activities conducted by SEET include:

Epidemiological and Toxicological Investigations

- Public Health Assessments and Consultations (Toxic Site Assessments)
- Pesticide Exposures
- Disease Cluster Response
- Cancer Mortality Trend Analysis
- Mercury Blood Screening

Environmental Health Advisories (See "Chapter IV: Preventive Health Outreach/Service/Education Programs")

- Mercury in Fish

Environmental Health Education (See "Chapter IV: Preventive Health Outreach")

- Health Effects Related to Pesticide Exposure
- Mercury in Fish
- Health Professional Education
- Public Health Response for Chemical Spills

Other projects as described below are representative of those coordinated by SEET.

Public Health Assessments and Consultations

Health assessors complete extensive Public Health Assessments or shorter Health Consultations for Superfund and other hazardous waste sites in Louisiana. The Public Health Assessment is an evaluation of all relevant environmental information, health outcome data, and community concerns about hazardous waste sites. It identifies populations potentially at risk and offers recommendations to mitigate exposures. A Health Consultation is a response to a request for information and provides advice on specific public health issues that could occur as a result of human exposure to hazardous materials. Based on the above documents, health studies, environmental remediation, health education, exposure investigation, or further research may be recommended.

As of January 3, 2003, there were 128 confirmed inactive and abandoned hazardous waste sites in Louisiana, and 342 similar potential sites, according to the DEPARTMENT OF ENVIRONMENTAL QUALITY. SEET is evaluating the public health impact of six of these sites, and the potential for further involvement and/or work with more of these sites is very likely. Details concerning these activities can be obtained from SEET. SEET also (1) develops fact sheets and other handouts to help inform the local community about health issues around hazardous waste sites; (2) responds to an individual's request for toxicological and medical information; and (3) makes presentations in public meetings and availability sessions around the state.

Vermiculite

Vermiculite is a porous mineral used as insulation and to hold water in potting soil. The vermiculite ore examined in this SEET study was mined in Libby, Montana from the early 1900's until the mine closed in 1990. It was distributed, mostly for commercial purposes, around the United States and abroad. This vermiculite was contaminated with tremolite asbestos. Exposure to asbestos in vermiculite ore may increase the risk of asbestosis, a chronic lung disease that can produce shortness of breath and permanent lung damage, as well as increase the risk of dangerous lung infections, lung cancer, mesothelioma (a rare cancer of the thin membranes that line the chest and abdomen), and other cancers, such as those of the larynx and of the gastrointestinal tract.

The United States Environmental Protection Agency (EPA) and Agency for Toxic Substances and Disease Registry (ATSDR) have identified six facilities in Louisiana which may have received contaminated Libby ore. These facilities include three in Orleans Parish, one in Jefferson Parish, one in St. John the Baptist Parish, and one in Caddo Parish. The OPH's SEET visited all of these sites in January 2002, and decided to analyze cancer statistics for four zip codes which contained the sites: Southern Mineralite Company, Orleans Parish (70117); W.R. Grace Company/ Zonolite, Jefferson Parish

(70121); Filter Media Company, Saint John the Baptist Parish (70084); and Best Wall Gypsum on Almonaster Boulevard in Orleans Parish (70126). The zip codes 70117, 70121, 70084 all contained exfoliation plants. The Almonaster Boulevard site was not an exfoliation plant but manufactured gypsum lath and plaster products. Nonetheless, the site at Almonaster Boulevard will also be reviewed at the zip code level because residential areas are present within the 70126 zip code, a half mile to the north and one mile to the west.

The health education outreach included a fact sheet that SEET compiled and mailed to the residents of the four zip codes in August and September 2002.

Pesticide Exposures

2002 Health-Related Pesticide Incident Report Program

The Health-Related Pesticide Incident Report (HRPIR) Program is a statewide surveillance program designed to investigate and evaluate adverse health effects related to acute pesticide exposure. In addition to investigating pesticide exposure complaints, SEET maintains a statewide database. Pesticide exposure complaints are obtained from two sources: the Louisiana Department of Agriculture and Forestry (LDAF) and the Louisiana Poison Control Center (LAPCC). Complaints obtained from LDAF are jointly investigated by LDAF and SEET. Investigations involve the collection and review of environmental and health data relevant to the pesticide exposure incident. A written summary of the findings is provided to the complainant.

Since October 2002, SEET has been receiving all pesticide-related calls from the LAPCC. Case reports obtained from the LAPCC are reviewed and entered into the pesticide surveillance database. Only cases reporting pesticide exposure and health effects are included in the database; cases with unclear exposure histories or no reported symptoms are not included. LAPCC cases are investigated solely by SEET.

Cases obtained from LDAF and LAPCC are evaluated to determine short-term and long-term health effects related to pesticide exposure. Cases are classified using standardized pesticide exposure criteria developed by the Centers for Disease Control and Prevention. Classification categories consider the level of certainty of exposure, documentation of health effects, and the plausibility of reported health effects based on the known toxicology of the pesticides.

Cases were classified using the following categories:

- Confirmed—Health effects confirmed as being related to pesticide exposure.
- Likely—Health effects likely related to pesticide exposure.
- Possible—Health effects possibly related to pesticide exposure.
- Unlikely—Health effects unlikely related to pesticide exposure.

- Not Pesticide-Related/Insufficient Information—Health effects not related to pesticide exposure, or there is insufficient evidence to determine the cause of health effects.
- No Symptoms Reported—No symptoms were reported related to pesticide exposure.

Louisiana's Registry of Pesticide Hypersensitive Individuals

In 1989, LDAF and SEET established a statewide Registry of Pesticide Hypersensitive Individuals. The registry's purpose is to enable hypersensitive individuals to receive prior notification of pesticide applications in the vicinity of their homes. With prior notification, individuals can take necessary precautions to protect themselves from inadvertent pesticide exposure. There is no charge for inclusion in the registry, although a physician licensed to practice medicine in Louisiana must certify that the registrant is hypersensitive to pesticides.

The registry, which is updated annually, is provided to all licensed applicators and pest control operators (PCOs). Applicators and PCOs are requested to notify registrants prior to making a pesticide application to a property within one hundred feet or adjacent to the registrant's property. Notification by applicators and PCOs is voluntary, and there is no penalty for non-compliance.

In 1999, SEET conducted a telephone survey of all registrants to evaluate their satisfaction with the registry. Of the 62 households on the registry, 37 (60 percent) participated in the survey. Results indicate that 62 percent of the surveyed registrants live in a rural area, of which 49 percent live on a farm. Forty-one percent of the households were notified every time there was a pesticide application within 100 feet of their property, 32 percent were sometimes notified, and 27 percent were never notified.

Overall, 62 percent of the surveyed registrants were satisfied with the registry, although 76 percent of the registrants believed that 100 feet was not a protective enough distance. All surveyed registrants stated that they would be willing to pay a small fee in exchange for mandatory notification by applicators.

Disease Cluster Response

SEET provides Louisiana residents with information on chemicals or other factors (environmental or naturally occurring) that could potentially cause a disease cluster and comparative rates of the disease in question. SEET also works closely with the Louisiana Tumor Registry (LTR) at the Louisiana State University Health Sciences Center to address concerns about a perceived increase in cancer rates throughout the state. During the 2002 calendar year, SEET was notified about or responded to approximately 20 reports of disease clusters throughout the state. In an effort to increase the effectiveness of the program, SEET sought to develop Cancer Cluster Investigation Guidelines along with the LTR to address Louisiana residents' concerns.

Health Professional Education

SEET conducts Health Professional Education as part of its educational activities. Training is targeted toward physicians and other health professionals located near Superfund and proposed Superfund sites who would potentially receive case studies from ATSDR. Information provided focuses on site contaminants, health effects from exposure, and clinical descriptions of the diagnosis and management of cases of chemical exposure.

Since 1996, SEET has disseminated ATSDR case studies to over 4,000 Louisiana physicians in 20 parishes.

Mercury Blood Screening

In 1998, 313 individuals from selected parishes in Louisiana participated in a blood mercury screening. Ninety-eight percent of the study participants were within an expected range of mercury blood levels. The remaining two percent exhibited slightly elevated mercury levels and were advised to decrease fish consumption.

As an outcome of this investigation, a health risk assessment is being conducted in partnership with the Tulane University School of Public Health and Tropical Medicine. This study will assess the exposure status of subsistence fishermen and their families as it relates to blood mercury levels.

The 1998 blood mercury services screening revealed that a small percentage of the participants had a slightly elevated blood mercury level. These individuals were from Ouachita and Morehouse parishes. In 2003, SEET will return to northeast Louisiana to offer additional blood mercury screening for commercial fishers and their families, and others who eat fish caught in local water bodies.

M. VITAL STATISTICS

Vital statistics data provide a body of information that serves as the foundation for monitoring the health and well-being of Louisiana residents. These data are collected via birth, death, fetal death, abortion, marriage, and divorce certificates. Collection and processing of vital statistics information is the responsibility of DHH-OPH's VITAL RECORDS REGISTRY.

A large number of health status indicators rely on vital statistics data. These indicators include infant death rates, numbers of low birthweight infants, percentage of mothers lacking adequate prenatal care, teen birth rates, homicide and suicide rates, rates of death from AIDS, motor vehicle injuries, and many others. Vital statistics data are used in both the public and the private sectors to identify health needs in the population and to target effective health interventions. Vital statistics health status indicators are also

used to measure achievement of the CENTERS FOR DISEASE CONTROL AND PREVENTION'S Healthy People 2010 objectives.

The role of the STATE CENTER FOR HEALTH STATISTICS is to analyze vital statistics data and distribute findings to government programs, community organizations, universities, and interested members of the general public. The Center accomplishes this through publication of the annual *Louisiana Vital Statistics Report*, and through response to ad hoc requests for data and information. The Center is also responsible for compilation of information from the DEPARTMENT OF HEALTH AND HOSPITALS programs to create the legislatively mandated annual *Louisiana Health Report Card*.

2001 Statistics

Please refer to "Chapter I: Population and Vital Statistics."

Reports

Reports and data tables published by the STATE CENTER FOR HEALTH STATISTICS, including the annual *Louisiana Health Report Card, Louisiana Vital Statistics Report,* and the *Louisiana Vital Statistics Overview*, can be viewed and downloaded by the public at the center's internet Web site (please refer to "Contact Information" at the end of this publication). The STATE CENTER FOR HEALTH STATISTICS also maintains databases of births, deaths, fetal deaths, abortions, marriages, and divorces, which it uses to respond to data requests from communities, agencies, and the general public through generation of ad hoc reports and analyses.

N. STATE HEALTH CARE DATA CLEARINGHOUSE

Act 622 of the 1997 Regular Legislative Session defined the STATE HEALTH CARE DATA CLEARINGHOUSE as the agency responsible for the collection of health care and health industry-related data. Act 622 charges the STATE HEALTH CARE DATA CLEARINGHOUSE with responsibility for creating population-based health care data registries that will offer Louisiana and its health care providers their first opportunity to plan and operate systematic intervention strategies that address morbidity.

In prioritizing the mandates of the HEALTH CARE DATA CLEARINGHOUSE, the OFFICE OF PUBLIC HEALTH considered the various health information data streams already in existence and the data collection experiences of some 36 other states, and determined that Louisiana would benefit most by focusing initial data collection efforts on hospital inpatient discharge data. In addition to the inpatient discharge database, the STATE HEALTH CARE DATA CLEARINGHOUSE also plans to work with hospitals and other facilities to develop a statewide hospital emergency room data system and other data sets which will

provide a more complete picture of Louisiana health, and help address the urgent concerns regarding the increasing threat of bioterrorism.

Louisiana Hospital Inpatient Discharge Database (LAHIDD)

Many areas of Louisiana are experiencing rising health care costs and shortages of health professionals. Consequently, it is essential that patients, health care professionals, hospitals, and third-party payers have the information needed to determine appropriate and efficient use of health services and accurately evaluate needs and usage. This requires an understanding of patterns and trends in the availability, utilization, and costs of health care services, and the underlying patterns of disease that necessitate these services.

The Louisiana Hospital Inpatient Discharge Database (LAHIDD) contains inpatient discharge data submitted to DHH-OPH by licensed hospitals in Louisiana, dating back to January 1, 1998. As the state's only comprehensive, population-based repository of hospital inpatient data, LAHIDD contains information needed to measure and evaluate illness and cost trends in the state (i.e., information on diagnoses, procedures performed, and the costs of those procedures). Until the creation of this database, this information could be estimated only for selected illnesses through surveys of subsets of the state's population.

For the most part, the hospital data sent to the registry are a natural by-product of hospital billing activity and are already widely available in a reasonably standard electronic format. The collection of these data place the smallest additional burden on the state's medical care providers, while speaking directly to the legislatively recognized need to understand "patterns and trends in the availability, use, and charges for medical services."

Receipt of the seventeenth quarterly data submissions from hospitals (discharges occurring from July to September 2002) is in progress. One hundred and ninety-seven licensed hospitals housing 26,281 beds participated in submission of data to the STATE HEALTH CARE DATA CLEARINGHOUSE in 2001 - the most recent year for which data are complete.

Activities to date

Prior to the fall of 2000, LAHIDD activities focused on creating the organizational infrastructure needed to assure two-way communication and an easy flow of data from hospitals to the STATE HEALTH CARE DATA CLEARINGHOUSE. These activities included:

- providing information to hospitals regarding regulations and submittal procedures;
- receiving scheduled data submissions;
- performing preliminary data error checks; and
- notifying hospitals when excessive numbers of data errors were found in these preliminary checks.

During 2001 and 2002, progress was made in the development of the electronic infrastructure needed to house the database and facilitate access to the data. This progress includes:

1) Collaborating with the DHH-OPH'S MANAGEMENT INFORMATION SYSTEMS SECTION to:

- complete the software structure needed to construct the LAHIDD database;
- load the data from January 1998 through December 2000 into the database structure;
- identify software tools needed to (i) improve the speed and accuracy of data loading and (ii) enable de-duplication and logical error checking - both of which are required before data are available for analysis; and
- Produce the first Louisiana Hospital Inpatient Discharge Database report for the Regular Legislative Session.

2) Collaborating with the OFFICE OF PUBLIC HEALTH MANAGEMENT INFORMATION SYSTEMS SECTION (for technical expertise) and CARDIOVASCULAR HEALTH CORE CAPACITY PROGRAM (for financing) to purchase:

- a hardware platform with the capacity to hold and backup the LAHIDD database, and
- a software tool that will enable internet-based data reporting.

3) Developing the following software tools, which were distributed to hospitals in spring 2001:

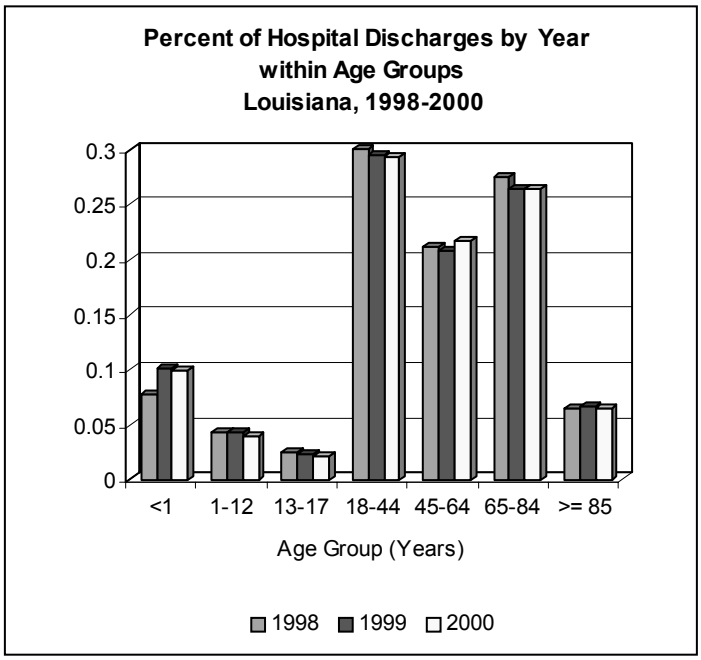
- a data entry tool to be used by hospitals that currently lack the capability to submit data electronically; and
- a data quality assurance tool that will enable hospitals to perform preliminary data error checks before submitting data to LAHIDD.

4) Determining the content and format of hard copy and Internet-based reports to be distributed to submitting hospitals

In 2003, an annual summary report will be submitted to the Legislature. The report summarizes the health events of Louisiana during the period 1998 - 2000 consolidated by patient and disease characteristics, along with cost of hospitalization. For the period 1998 - 2000, Louisiana patterns of morbidity, use and charges for medical services may be summarized as follows:

Demographics:

Patients between 18 and 44 years of age accounted for the highest percentage of hospital stays in Louisiana for the period 1998 - 2000. Those aged 65 through 84 followed closely at slightly lower percentages for the three-year period.



Source: Louisiana Department of Health and Hospitals,
Louisiana Hospital Inpatient Discharge Database

Principal Diagnosis:

The most common diagnosis for hospitalization during the three-year period was "live birth" of an infant. In 1998 and 1999, "pneumonia" (except that caused by tuberculosis or STDs) ranked second as a principal diagnosis for hospital discharges. In the year 2000, "pneumonia" (except that caused by tuberculosis or STDs) was surpassed by "coronary atherosclerosis and other heart disease" as the second ranking principal diagnosis.

The following three tables summarize the leading diagnosis resulting in hospitalization using the body system classification. "Diseases of the circulatory system", which accounted for approximately 19 percent of all discharges for the period 1998 - 2000, ranked first. "Complications of pregnancy, childbirth and the puerperium" ranked second (at approximately 13 percent), while "diseases of the respiratory system" accounted for approximately 11 percent of discharges in the three-year period *(Table 1a-1c).*

Top 10 Principal Diagnoses, Louisiana, 1998			
Rank	**Principal diagnosis**	**Number of discharges**	**Percent of all discharges**
1	Diseases of the circulatory system	89,396	18.95
2	Complications of pregnancy, childbirth, and the puerperium	62,869	13.33
3	Diseases of the respiratory system	50,261	10.66
4	Diseases of the digestive system	41,948	8.89
5	Injury and poisoning	34,739	7.37
6	Diseases of the genitourinary system	27,104	5.75
7	Perinatal conditions	26,030	5.52
8	Mental disorders	25,487	5.40
9	Neoplasms	25,071	5.32
10	Endocrine, nutritional, metabolic and immune diseases	18,366	3.89
	Total Top 10 Discharges	401,271	85.08
	Total Discharges in 1998	471,636	100.00

Top 10 Principal Diagnoses, Louisiana, 1999			
Rank	**Principal diagnoses**	**Number of discharges**	**Percent of all discharges**
1	Diseases of the circulatory system	88,196	18.49
2	Complications of pregnancy, childbirth, and the puerperium	62,462	13.10
3	Diseases of the respiratory system	53,100	11.13
4	Diseases of the digestive system	41,192	8.64
5	Perinatal conditions	36,884	7.73
6	Injury and poisoning	31,997	6.71
7	Mental disorders	28,119	5.90
8	Diseases of the genitourinary system	26,421	5.54
9	Neoplasms	22,671	4.75
10	Endocrine, nutritional, metabolic and immune diseases	18,241	3.82
	Total Top 10 Discharges	409,283	85.81
	Total Discharges in 1999	476,956	100.00

Top 10 Principal Diagnoses, Louisiana, 2000			
Rank	**Principal diagnoses**	**Number of discharges**	**Percent of all discharges**
1	Diseases of the circulatory system	96,397	19.04
2	Complications of pregnancy, childbirth, and the puerperium	65,576	12.95
3	Diseases of the respiratory system	49,487	9.78
4	Diseases of the digestive system	43,010	8.50
5	Perinatal conditions	39,844	7.87
6	Injury and poisoning	35,171	6.95
7	Mental disorders	29,096	5.75
8	Diseases of the genitourinary system	27,203	5.37
9	Neoplasms	24,156	4.77
10	Endocrine, nutritional, metabolic and immune diseases	19,588	3.87
	Total Top 10 Discharges	429,528	84.85
	Total Discharges in 2000	506,214	100.00

Note: Shadowed areas indicate rank unchanged for this three-year period. Grouping used in these tables is done by using the first two-digits of the multiple level CCS codes, called Body System.

Source: Louisiana Hospital Inpatient Discharges Database

Principal diagnoses with the highest charges per stay and the longest average lengths of stay:

In 1998 and 2000, diagnoses related to newly born infants (e.g., “short gestation, low birthweight, and fetal growth retardation”) were among the top three most expensive diagnoses treated in Louisiana hospitals on a charges per stay basis. Hospitals charged an average of $48,903 per stay for these diagnoses in 1998, and $54,480 per stay in 2000. For both years, these diagnoses had the longest average hospital stay, at 21 days both in the year 1998 and the year 2000. In 1999, “Spinal cord injury” was the most expensive condition treated in Louisiana hospitals, with average charges of $49,111 per stay and average hospital stays of 15 days. Six of the top 10 most costly diagnoses also had the longest lengths of stay in 1998 - 2000.

Additional information on the LAHIDD program may be found on the Internet at:
http://www.oph.dhh.state.la.us/recordsstatistics/statistics/statehealth/index.html